

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 09/765,555C  
Source: 1FW/6  
Date Processed by STIC: 3/15/06

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 03/15/2006

PATENT APPLICATION: US/09/765,555C

TIME: 11:14:37

Input Set : E:\27801-20014.20 - Substitute Seqlist (2).txt

Output Set: N:\CRF4\03152006\I765555C.raw

```

3 <110> APPLICANT: BARBAS, Carlos
4     STEGE, Justin
5     GUAN, Xueni
6     DALMIA, Bipin
8 <120> TITLE OF INVENTION: METHODS AND COMPOSITIONS TO MODULATE
9     EXPRESSION IN PLANTS
11 <130> FILE REFERENCE: 27801-20014.20
13 <140> CURRENT APPLICATION NUMBER: 09/765,555C
14 <141> CURRENT FILING DATE: 2001-01-19
16 <150> PRIOR APPLICATION NUMBER: 09/620,897
17 <151> PRIOR FILING DATE: 2000-07-21
19 <150> PRIOR APPLICATION NUMBER: US 60/177,468
20 <151> PRIOR FILING DATE: 2000-01-21
22 <160> NUMBER OF SEQ ID NOS: 79
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 532
28 <212> TYPE: DNA
29 <213> ORGANISM: Artificial Sequence
31 <220> FEATURE:
32 <223> OTHER INFORMATION: Promoter CsvMV
34 <400> SEQUENCE: 1
35 tctagaaact agcttccaga aggtaattat ccaagatgta gcatcaagaa tccaatgttt      60
36 acgggaaaaa ctatggaagt attatgtgag ctcagcaaga agcagatcaa tatgcggcac      120
37 atatgcaacc tatgttcaaa aatgaagaat gtacagatac aagatcctat actgccagaa      180
38 tacgaagaag aatacgtaga aattgaaaaa gaagaaccag gcgaagaaaa gaatcttgaa      240
39 gacgtaagca ctgacgacaa caatgaaaag aagaagataa ggtcgggtgat tgtgaaagag      300
40 acatagagga cacatgtaag gtggaaaatg taagggcgga aagtaacctt atcaciaagg      360
41 aatcttatcc cccactactt atccttttat atttttccgt gtcatttttg cccttgagtt      420
42 ttctatatata aggaaccaag ttcggcattt gtgaaaacaa gaaaaaattt ggtgtaagct      480
43 attttctttg aagtactgag gatacaactt cagagaaatt tgtaagtttg ta              532
45 <210> SEQ ID NO: 2
46 <211> LENGTH: 18
47 <212> TYPE: DNA
48 <213> ORGANISM: Artificial Sequence
50 <220> FEATURE:
51 <223> OTHER INFORMATION: Zinc finger protein 2C7 binding site
53 <400> SEQUENCE: 2
54 gcgtgggcgg cgtgggcg
56 <210> SEQ ID NO: 3
57 <211> LENGTH: 51
58 <212> TYPE: DNA
59 <213> ORGANISM: Artificial Sequence

```

## RAW SEQUENCE LISTING

DATE: 03/15/2006

PATENT APPLICATION: US/09/765,555C

TIME: 11:14:37

Input Set : E:\27801-20014.20 - Substitute Seqlist (2).txt

Output Set: N:\CRF4\03152006\I765555C.raw

```

61 <220> FEATURE:
62 <223> OTHER INFORMATION: Promoter pc7rbTATA
64 <400> SEQUENCE: 3
65 cccgggtata taataagctt ggcattccgg tactgttggt aaagccacca t 51
67 <210> SEQ ID NO: 4
68 <211> LENGTH: 3121
69 <212> TYPE: DNA
70 <213> ORGANISM: Artificial Sequence
72 <220> FEATURE:
73 <223> OTHER INFORMATION: pND3008 coding region
75 <400> SEQUENCE: 4
76 agcgtgaccc ggtcgtgccc ctctctagag ataatgagca ttgcatgtct aagttataaa 60
77 aaattaccac atattttttt tgtcacactt gtttgaagtg cagtttatct atctttatac 120
78 atatatatta actttactct acgaataata taatctatag tactacaata atatacagtgt 180
79 tttagagaat catataaatg aacagttaga catgggtctaa aggacaattg agtatatttga 240
80 caacaggact ctacagtttt atcttttttag tgtgcatgtg ttctcctttt tttttgcaaa 300
81 tagcttcacc tatataatac ttcatccatt ttattagtag atccatttag ggtttagggt 360
82 taatggtttt tatagactaa tttttttagt acatctattt tattctattt tagcctctaa 420
83 attaagaaaa ctaaaactct attttagttt ttttatttaa taatttagat ataaaataga 480
84 ataaaataaa gtgactaaaa attaaacaaa taccctttta gaaattaaaa aaactaagga 540
85 aacatttttc ttgtttcgag tagataatgc cagcctgtta aacgccgtcg acgagtctaa 600
86 cggacaccaa ccagcgaacc agcagcgtcg cgtcgggcca agcgaagcag acggcacggc 660
87 atctctgtcg ctgcctctgg acccctctcg agagtccgcg tccaccgttg gacttgctcc 720
88 gctgtcggca tccagaaatt gcgtggcgga gcggcagacg tgagccggca cggcaggcgg 780
89 cctcctctc ctctcagggc acggcagcta cgggggattc ctttcccacc gctccttcgc 840
90 tttcccttcc tgcgccgccc taataaatag acacccctc cacaccctct tcccccaacc 900
91 tcgtgttggt cggagcgcac acacacacaa ccagatctcc cccaaatcca cccgtcggca 960
92 cctcgccttc aaggtacgcc gctcgtctc cccccccccc cctctctacc ttctctagat 1020
93 cggcgttccg gtccattggt agggcccggt agttctactt ctgttcatgt ttgtgttaga 1080
94 tccgtgtttg tgttagatcc gtgctgctag cgttcgtaca cggatgcgac ctgtacgtca 1140
95 gacacgttct gattgctaac ttgccagtgt ttctctttgg ggaatcctgg gatggctcta 1200
96 gcggttccgc agacgggatc gatttcatga ttttttttgt ttcggttgc atagggtttggt 1260
97 ttgccctttt cctttatttc aatatatgcc gtgcacttgt ttgtcgggtc atcttttcat 1320
98 gctttttttt gtcttggttg tgatgatgtg gtctggttgg gcggtcgttc tagatcggag 1380
99 tagaattctg tttcaaacta cctggtggat ttattaattt tggatctgta tgtgtgtgcc 1440
100 atacatatcc atagttacga attgaagatg atggatggaa atacgatct aggataggta 1500
101 tacatgttga tgcgggtttt actgatgc atacagagat gctttttgtt cgcttggttg 1560
102 tgatgatgtg gtgtggttgg gcggtcgttc attcgttcta gatcggagta gaatactgtt 1620
103 tcaaactacc tgggtgtattt attaatattt gaactgtatg tgtgtgtcat acatcttcat 1680
104 agttacagat ttaagatgga tggaaatatc gatctaggat aggtatacat gttgatgtgg 1740
105 gttttactga tgcataatac tgatggcata tgcagcatct attcatatgc tctaaccttg 1800
106 agtacctatc tattataata aacaagtatg ttttataatt attttgatct tgatatactt 1860
107 ggatgatggc atatgcagca gctatatgtg gattttttta gccctgcctt catacgetat 1920
108 ttatttgctt ggtactgttt cttttgtcga tgcctaccct gttgtttggt gttacttctg 1980
109 caggtcgact ctagaggatc tatggcccag gcggccctcg agctccccta tgcttgccct 2040
110 gtcgagtcct gcgactgccg cttttctaag tcggctgacg tgaagcgcca tatccgcac 2100
111 cacacggcc agaagccctt ccagtgctga atatgatgc gtaacttcag tcgtatgac 2160
112 caccttacca cccacatccg caccacaca ggcgagaagc cttttgcctg tgacatttgt 2220
113 gggaggaagt ttgccaggag tgatgaacgc aagaggcata ccaaaatcca taccggtgag 2280

```

## RAW SEQUENCE LISTING

DATE: 03/15/2006

PATENT APPLICATION: US/09/765,555C

TIME: 11:14:37

Input Set : E:\27801-20014.20 - Substitute Seqlist (2).txt

Output Set: N:\CRF4\03152006\I765555C.raw

```

114 aagccctatg cttgccctgt cgagtcctgc gatcgccgct tttctaagtc ggctgatctg 2340
115 aagcgccata tccgcatcca cacaggccag aagcccttcc agtgtcgaat atgcatgcgt 2400
116 aacttcagtc gtagtgacca ccttaccacc cacatccgca cccacacagg cgagaagcct 2460
117 tttgcctgtg acatttgtgg gaggaagttt gccaggagtg atgaacgcaa gaggcatacc 2520
118 aaaatccatt taagacagaa ggactctaga actagtggcc aggccggcca ggctagcccg 2580
119 aaaaagaaac gcaaagttgg gcgcgcgcgac gcgctggacg atttcgatct cgacatgctg 2640
120 ggttctgatg ccctcgatga ctttgacctg gatatggttg gaagcgacgc attggatgac 2700
121 tttgatctgg acatgctcgg ctccgatgct ctggacgatt tcgatctcga tatgttaatt 2760
122 aactaccgct acgacgttcc ggactacgct tcttgagaat tcgcggccgc gggcccagac 2820
123 ctaggaggga gctcaagatc ccccgaaattt ccccgatcgt tcaaacattt ggcaataaag 2880
124 tttcttaaga ttgaatcctg ttgccggtct tgcgatgatt atcatctaatt ttctgttgaa 2940
125 ttacgttaag catgtaataa ttaacatgta atgcatgacg ttatttatga gatgggtttt 3000
126 tatgattaga gtcccgcgat tatacattta atacgcgata gaaaacaaa tatagcgcgc 3060
127 aaactaggat aaattatcgc gcgcggtgtc atctatgtta ctagatccgg gaattgggta 3120
128 c 3121
130 <210> SEQ ID NO: 5
131 <211> LENGTH: 3069
132 <212> TYPE: DNA
133 <213> ORGANISM: Artificial Sequence
135 <220> FEATURE:
136 <223> OTHER INFORMATION: pND3018 coding region
138 <400> SEQUENCE: 5
139 agcgtgaccc ggctcgtgcc ctctctagag ataatgagca ttgcatgtct aagttataaa 60
140 aaattaccac atattttttt tgtcacactt gtttgaagtg cagtttatct atctttatac 120
141 atatatttta actttactct acgaataata taatctatag tactacaata atatcagtgt 180
142 tttagagaat catataaatg aacagttaga catggtctaa aggacaattg agtattttga 240
143 caacaggact ctacagtttt atcttttttag tgtgcatgtg ttctcctttt tttttgcaaa 300
144 tagcttcacc tatataatac ttcattccatt ttattagtac atccatttag ggtttagggt 360
145 taatggtttt tatagactaa tttttttagt acatctattt tattctattt tagcctctaa 420
146 attaagaaaa ctaaaactct attttagttt ttttatttaa taatttagat ataaaataga 480
147 ataaaataaa gtgactaaaa attaaacaaa taccctttta gaaattaaaa aaactaagga 540
148 aacatttttc ttgtttcgag tagataatgc cagcctgtta aacgcgcgtc acgagtctaa 600
149 cggacaccaa ccagcgaacc agcagcgtcg cgtcgggcca agcgaagcag acggcacggc 660
150 atctctgtcg ctgcctctgg acccctctcg agagttccgc tccaccgttg gacttgctcc 720
151 gctgtcggca tccagaaatt gcgtggcgga gcggcagacg tgagccggca cggcaggcgg 780
152 cctcctctc ctctcacggc acggcagcta cgggggattc ctttcccacc gctccttcgc 840
153 tttcccttcc tcgcccgcgc taataaatag acacccctc cacaccctct tcccccaacc 900
154 tcgtgttggt cggagcgcac acacacacaa ccagatctcc cccaaatcca cccgtcggca 960
155 cctccgcttc aaggtaacgc gctcgtctc cccccccccc cctctctacc ttctctagat 1020
156 cggcggttcc gtccatgggt agggcccggg agttctactt ctggtcatgt ttgtgttaga 1080
157 tccgtgtttg tgtttagatc gtgctgctag cgttcgtaca cggatgcgac ctgtacgtca 1140
158 gacacgttct gattgctaac ttgccagtgt ttctcttttg ggaatcctgg gatggtctca 1200
159 gccgttccgc agacgggatc gatttcatga tttttttgt ttcgttgcat aggggttggt 1260
160 ttgccctttt cctttatttc aatatatgcc gtgcacttgt ttgtcgggtc atcttttcat 1320
161 gctttttttt gtcttggttg tgatgatgtg gtctgggttg gcggtcgttc tagatcggag 1380
162 tagaattctg tttcaaacta cctggtggat ttattaattt tggatctgta tgtgtgtgcc 1440
163 atacatatte atagttacga attgaagatg atggatggaa atatcgatct aggataggta 1500
164 tacatgttga tgcgggtttt actgatgcac atacagagat gctttttgtt cgttggttg 1560
165 tgatgatgtg gtgtggttgg gcggtcgttc attcgttcta gatcggagta gaatactggt 1620

```

## RAW SEQUENCE LISTING

DATE: 03/15/2006

PATENT APPLICATION: US/09/765,555C

TIME: 11:14:37

Input Set : E:\27801-20014.20 - Substitute Seqlist (2).txt

Output Set: N:\CRF4\03152006\I765555C.raw

```

166 tcaaactacc tgggtgtatatt attaatatttg gaactgtatg tgtgtgtcat acatcttcat      1680
167 agttacgagt ttaagatgga tggaaatatc gatctaggat aggtatacat gttgatgtgg      1740
168 gttttactga tgcataataca tgatggcata tgcagcatct attcatatgc tctaaccttg      1800
169 agtacctatc tattataata aacaagtatg ttttataatt attttgatct tgatatactt      1860
170 ggatgatggc atatgcagca gctatatgtg gattttttta gccctgcctt catacgtat      1920
171 ttatttgctt ggtactgttt cttttgtcga tgctcaccct gttgttttgg gttacttctg      1980
172 caggtcgact ctagaggatc cactagttag ccatgggcta gcatggccgc tgccgtgcgc      2040
173 atgaacatcc agatgctgct cgaagccgct gattatctgg aacgccggga gcgcgaagcc      2100
174 gagcacggct acgccagcat gctgccatat ccgaaaaaga aacgcaagggt ggcccaggcg      2160
175 gccctcgagc tcccctatgc ttgccctgtc gaggctctgc atcgccgctt ttctaagtcg      2220
176 gctgatctga agcgccatat ccgcatccac acaggccaga agcccttcca gtgtcgaata      2280
177 tgcatgcgta acttcagtcg tagtgaccac cttaccaccc acatccgcac ccacacaggc      2340
178 gagaagcctt ttgacctgta catttgggg aggaagtttg ccaggagtga tgaacgcaag      2400
179 aggcatacca aaatccatac cggtgagaag ccctatgctt gccctgtcga gtctgtcgat      2460
180 cgccgctttt ctaagtgcggc tgatctgaag cgccatatcc gcatccacac aggccagaag      2520
181 cccttccagt gtcgaatatg catgcgtaac ttcagtcgta gtgaccacct taccacccac      2580
182 atccgcaccc acacaggcga gaagcctttt gcctgtgaca tttgtgggag gaagtttgcc      2640
183 aggagtgatg aacgcaagag gcataccaaa atccatttaa gacagaagga ctctagaact      2700
184 agtggccagg ccggccagta cccgtacgac gttccggact acgcttcttg aaagcttggg      2760
185 accgagctcg gatccccga atttccccga tcgttcaaac atttggcaat aaagtttctt      2820
186 aagattgaat cctgttgccg gtcttgcat gattatcatc taatttctgt tgaattacgt      2880
187 taagcatgta ataattaaca tgtaatgcat gacgttattt atgagatggg tttttatgat      2940
188 tagagtcccg caattataca tttaatagcg gatagaaaac aaaatatagc gcgcaacta      3000
189 ggataaatta tcgcgcgcgg tgatcatctat gttactagat ccgggaattc cggaccggta      3060
190 ccagcggcc                                     3069
192 <210> SEQ ID NO: 6
193 <211> LENGTH: 156
194 <212> TYPE: DNA
195 <213> ORGANISM: Artificial Sequence
197 <220> FEATURE:
198 <223> OTHER INFORMATION: 6X2C7 binding site
200 <400> SEQUENCE: 6
201 cgtgctagcg cgtgggcggc gtgggcgaac aagcgtgggc ggcggtgggcg aacaagcgtg      60
202 ggcggcgtgg gcgactagtg ctagcgcgtg ggcggcgtgg gcgaacaagc gtgggcggcg      120
203 tgggcgaaca agcgtgggcg gcgtgggcga ctagtg                                     156
205 <210> SEQ ID NO: 7
206 <211> LENGTH: 18
207 <212> TYPE: DNA
208 <213> ORGANISM: Artificial Sequence
210 <220> FEATURE:
211 <223> OTHER INFORMATION: ZFPap3
213 <400> SEQUENCE: 7
214 gatggagttg aagaagta                                     18
216 <210> SEQ ID NO: 8
217 <211> LENGTH: 21
218 <212> TYPE: DNA
219 <213> ORGANISM: Artificial Sequence
221 <220> FEATURE:
222 <223> OTHER INFORMATION: ZFP from -85 to -65

```

## RAW SEQUENCE LISTING

DATE: 03/15/2006

PATENT APPLICATION: US/09/765,555C

TIME: 11:14:37

Input Set : E:\27801-20014.20 - Substitute Seqlist (2).txt

Output Set: N:\CRF4\03152006\I765555C.raw

```

224 <400> SEQUENCE: 8
225 gcctccttcc tcctctcact c 21
227 <210> SEQ ID NO: 9
228 <211> LENGTH: 18
229 <212> TYPE: DNA
230 <213> ORGANISM: Artificial Sequence
232 <220> FEATURE:
233 <223> OTHER INFORMATION: ZFPm1 from -68 to -85
235 <400> SEQUENCE: 9
236 tgagaggagg aaggaggc 18
238 <210> SEQ ID NO: 10
239 <211> LENGTH: 18
240 <212> TYPE: DNA
241 <213> ORGANISM: Artificial Sequence
243 <220> FEATURE:
244 <223> OTHER INFORMATION: ZFPm2 from -65 to -82
246 <400> SEQUENCE: 10
247 gagtgagagg aggaagga 18
249 <210> SEQ ID NO: 11
250 <211> LENGTH: 24
251 <212> TYPE: DNA
252 <213> ORGANISM: Artificial Sequence
254 <220> FEATURE:
255 <223> OTHER INFORMATION: ZFP from 294 to 317
257 <400> SEQUENCE: 11
258 gccaaactact acggctccct cacc 24
260 <210> SEQ ID NO: 12
261 <211> LENGTH: 18
262 <212> TYPE: DNA
263 <213> ORGANISM: Artificial Sequence
265 <220> FEATURE:
266 <223> OTHER INFORMATION: ZFPm3 from 311 to 294
268 <400> SEQUENCE: 12
269 ggagccgtag tagttggc 18
271 <210> SEQ ID NO: 13
272 <211> LENGTH: 18
273 <212> TYPE: DNA
274 <213> ORGANISM: Artificial Sequence
276 <220> FEATURE:
277 <223> OTHER INFORMATION: ZFPm4 from 317 to 300
279 <400> SEQUENCE: 13
280 ggtgagggag ccgtagta 18
282 <210> SEQ ID NO: 14
283 <211> LENGTH: 3300
284 <212> TYPE: DNA
285 <213> ORGANISM: Artificial Sequence
287 <220> FEATURE:
288 <223> OTHER INFORMATION: Partial sequence of pMal-m1 and zinc finger
289 protein ZFPm1

```

**VERIFICATION SUMMARY**

DATE: 03/15/2006

PATENT APPLICATION: US/09/765,555C

TIME: 11:14:38

Input Set : E:\27801-20014.20 - Substitute Seqlist (2).txt

Output Set: N:\CRF4\03152006\I765555C.raw